

Media release

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Strengthening the security of supply for the long term**Replacement and upgrade of the extra-high-voltage grid between Innertkirchen and Mettlen**

Swissgrid has developed various planning territories for the replacement and upgrade of the extra-high-voltage grid between Innertkirchen and Mettlen and applied to the Swiss Federal Office of Energy to establish a planning territory in the sectoral plan for transmission lines. Three potential planning territories are being considered.

Most of the 61-kilometre line between Innertkirchen (in the canton of Berne) and Mettlen (in the canton of Lucerne) is over 70 years old. The entire line, which is currently operated with a voltage of 220 kilovolt (kV), will be upgraded to a voltage of 380 kV as part of a renewal project. This increase in capacity is necessary to ensure the transportation of the increasing volume of electricity generated by the Oberhasli power plants and the hydroelectric power plants in Valais and Ticino to the Swiss Central Plateau. This will permanently strengthen the security of supply across Switzerland.

Evaluation of potential planning territories

In mid-2021, Swissgrid applied to the Swiss Federal Office of Energy to establish a planning territory between Innertkirchen and Mettlen in the federal government's sectoral plan for transmission lines. Planning territories are geographic areas within which a planning corridor, including transmission technology (underground cable, overhead line or combined options), can then be selected during the course of the project. To this end, Swissgrid examined three partly overlapping planning territories:

1. **Glaubenberg planning territory:** This planning territory largely follows the existing 220 kV line from Innertkirchen via Giswil and Glaubenberg to Malters and then on to Mettlen. The greatest challenge of this option is the "Glaubenberg" flysch moor landscape. No overhead lines or underground cables installed using open trenching techniques are permitted in this landscape of national importance. Swissgrid therefore proposes to tunnel under Glaubenberg.
2. **Pilatus planning territory:** As a second option, a planning territory that leads from Giswil through the Sarnera Valley and then west or east of Pilatus to Littau and Mettlen was examined. The main challenges presented by this option are the large settlement areas (Giswil, Sarnen, Alpnach, Hergiswil and Kriens), the scattered settlements, and the limitations imposed by the obstacles of the Kägiswil, Alpnach and Buochs airfields and the nationally protected Pilatus region.

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3. **Entlebuch planning territory:** As a third alternative, a planning territory could lead west from Giswil through Entlebuch to Mettlen. This option crosses through the UNESCO Entlebuch biosphere reserve and is much longer than the two other evaluated planning territories.

Swissgrid recommends the Glaubenberg planning territory

Each of the submitted options has specific pros and cons with respect to regional planning, the environment, technology and economic viability. From Swissgrid's perspective, the Glaubenberg planning territory is the best of the three options: firstly, this option touches fewer settlement areas and involves fewer obstacles than those presented by the Sarnera Valley and Pilatus. Secondly, it is much shorter than the option via Entlebuch and so has less of an impact on the ground, the natural environment and the landscape, requires less construction material and has lower energy losses and costs. The replacement and upgrade of the Innertkirchen – Mettlen extra-high-voltage grid makes an important contribution to the security of supply in central Switzerland. Swissgrid's focus is on protecting people and nature. Swissgrid strives to create solutions that have the least possible impact on settlement areas and protected areas.

The Mettlen – Hellbühl (Littau) section and Innertkirchen line lead-in are considered separately

The section between Mettlen and Hellbühl (Littau) is considered separately. It was upgraded to 380 kV in 1990, but is currently operating at just 220 kV. The Innertkirchen – Mettlen and Bickigen – Mettlen lines approach one another to the west of Rothenburg, from where they are bundled in the section to Mettlen. With this in mind, it makes sense to consider both lines together in this section. Swissgrid will therefore review the line routing in this territory as part of the planned Bickigen – Mettlen line renovation. The line connection for the Innertkirchen substation will be considered separately within the Innertkirchen – Mettlen sectoral plan process: two additional transmission lines run parallel to the Innertkirchen – Mettlen line along a roughly two-kilometre section. As all three lines pass through the settlement area, the only option in this section is to install an underground cable in a tunnel.

Next steps

In the next stage of the sectoral plan process, a monitoring group appointed by the Swiss Federal Office of Energy (SFOE) will come together with the federal authorities, the affected cantons and environmental associations to discuss the planning territory options evaluated by Swissgrid and assess the effects on the region, environment, technology and costs. The monitoring group's recommendation will then be taken forward to the public consultation stage. The Federal Council is expected to decide on the planning territory between Innertkirchen and Mettlen by autumn 2023. Swissgrid will then set out various planning corridors for each transmission technology (overhead line, underground cable or combined versions) within this planning territory and submit these to the SFOE monitoring group. The corridor will then be

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stipulated by the Federal Council. Ideally, the renewal of the Innertkirchen – Mettlen extra-high-voltage grid will be completed by 2035. After that, the existing line, parts of which run through the settlement area, will be removed.

Dialogue with the public

Dialogue with citizens, municipalities, authorities and associations is very important to Swissgrid. Swissgrid will be holding information events on the project on **Monday, 22 November 2021 at 6.30 p.m. in Malters** and on **Thursday, 25 November 2021 at 6.30 p.m. in Giswil**.

Find out more about the new extra-high-voltage line at www.swissgrid.ch/innertkirchen-mettlen.

For more information, visit media@swissgrid.ch or call +41 58 580 31 00.

Powering the future

Swissgrid is the national grid company. As the owner of Switzerland's extra-high-voltage grid, it is responsible for operating the grid safely and without discrimination and for maintaining, modernising and expanding the grid efficiently and with respect for the environment. Swissgrid has about 600 highly qualified people from 22 countries at its sites in Aarau, Prilly, Castione, Landquart, Laufenburg, Ostermundigen and Uznach. As a member of the European Network of Transmission System Operators for Electricity (ENTSO-E), it is also responsible for grid planning, system management and market design in the European exchange of electricity. The majority of Swissgrid's share capital is jointly held by various Swiss electricity companies.